Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Bonds Worksheet

*Directions:* Tell whether each substance has ionic or covalent bonds from its properties.

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| Substance | Properties | Ionic or Covalent |
| Calcium carbonate, CaCO3  (limestone) | Solid, dissolves in water |  |
| Magnesium chloride, MgCl2 | Crystalline solid, conducts electricity |  |
| Propane, C3H8  (used in grills) | Gas, low density |  |
| Acetic acid, C2H4O2  (vinegar) | Liquid, low boiling point |  |
| Dihydrogen monoxide, H2O  (water) | Liquid, conducts electricity but very little |  |
| Sodium bicarbonate, NaHCO3  (baking soda) | Dissolves in water, high boiling point |  |
| Iron oxide, Fe2O3  (rust) | Solid, high melting point |  |
| Nitrogen dioxide, NO2  (found in car exhaust) | Gas, does not conduct electricity |  |
| Cellulose, C6H7O2(OH)3  (found in wood) | Soft solid, floats in water |  |
| Sodium hydroxide, NaOH  (lye) | Solid, high boiling point |  |
| Silicon dioxide, SiO2  (sand) | Sinks in water, does not conduct electricity |  |
| Butane, C4H10  (lighter fluid) | Liquid, low density |  |
| Pyrite, Fe2S  (fool’s gold) | Solid, high melting point |  |
| Carbon dioxide, CO2  (exhaled from lungs) | Gas, low boiling point |  |
| Sucrose, C12H22O11  (sugar) | Low boiling point, conducts electricity but very little |  |
| Sodium chloride, NaCl  (salt) | Crystalline solid, high density |  |
| Sulfuric acid, H2SO4  (used in car batteries) | Dissolves in water, conducts electricity |  |